

2. Claims 4-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wargotz et al. in view of McGregor et al. as applied to claim 1 above, and further in view of Livingston et al.

**Claim Rejections - 35 U.S.C. § 103(a)**

1. *Claims 1-3, 8 and 9 Over Wargotz et al. In View of McGregor et al.*

In rejecting claims 1-3, 8 and 9 over Wargotz et al. in view of McGregor et al., the Examiner reiterates the grounds of rejection in the previous Office Action and further responds to Applicant's arguments as follows:

Applicant argues that the Office Action has not established a *prima facie* case of obviousness because the three basic criteria to establish a *prima facie* case have not been presented in the Office Action. This argument is not found persuasive because such criteria are being presented in the Office Action. Specifically, the combination of Wargotz et al. and McGregor et al. teach all the claims limitations (third condition), and it is suggested by McGregor et al. that including additives in the inner layer would provide resistance to degradation of the insulation due to high voltage passing through the conductor (first and second conditions). Accordingly, a *prima facie* case of obviousness has been established.

Applicant also argues that Wargotz et al. and McGregor et al. are both completely silent on the relative tensile strength and elongation at break of the inner and outer layers. Examiner would disagree [sic]. McGregor et al. teaches additives being added in the inner layer, and it is the fact that additives are mixed into the base material of the inner layer that result in the lower values of tensile strength and elongation at break of the inner layer, as claimed in the claimed invention (claim 8). Accordingly, McGregor et al. is not completely silent about the tensile strength and the elongation at break of the inner and outer layers.

Applicant then argues that Wargotz et al. is directed to an underground power cable, while McGregor et al. is directed to magnet wire insulation that can withstand voltage from inverter driven motors. In response to this argument, it is found that both

Wargotz et al. and McGregor et al. are directed to electrical cables. Therefore, it is appropriate to use the teaching of McGregor et al. to modify the cable of Wargotz et al.

Office Action at pages 5-6.

Applicant maintains the claims are allowable for the reasons set forth in the last response, and, therefore, incorporates these reasons as if fully set forth herein. Furthermore, Applicants states as follows.

The grounds of rejection are entirely incorrect with respect to the disclosure of McGregor et al. There is no support in this disclosure to find that the additives added to one of the layers of the cable sheath of McGregor et al. would necessarily result the recited relative values of tensile strength and elongation at break for the inner and outer layers. Rather, only when one is aware of the disclosure of Applicant's invention does would one know how to go about modifying the cable of Wargotz et al. However, such pure hindsight reconstruction is improper.

Without the knowledge taken from Applicant's disclosure, one skilled in the art could not have concluded from the teachings or suggestions of McGregor et al. to modify the cable structure of Wargotz et al. so as to include Applicant's claimed inner and outer sheaths. McGregor et al. describes a magnet wire insulation that is designed with particular applicability to withstand voltage wave shapes present in inverter driven motors (see abstract). To avoid **degradation of the wire insulation**, McGregor et al. adds a mixture of silica and chromium oxide to **at least one** of the two polymer layers of the insulation (see claim 1). The reference is entirely silent about tensile strength and elongation at break of the insulation.

Moreover, since the additives can be added with the method of McGregor et al. to "at least one" of the layers, they can be added either to the first layer or to the second layer or to both

layers. That is possible because a degradation of the complete wire insulation would be avoided. Therefore, it is impossible for a person skilled in the art to take away from McGregor et al. a two layer insulation with the special characteristics of the invention.

Indeed, even if, for the sake of argument alone, the inclusion of additives to a layer would necessarily reduce the tensile strength and elongation at break of that layer, the additives would have to be added only to the inner layer. That is, these additives could not be added to the outer layer or to both layers of the insulation but they **must be added to only the inner layer**. There is no such disclosure or direction in McGregor et al. for the skilled artisan.

In sum, the teaching of McGregor et al. is completely different from the method of the invention and there is no hint at all to reduce tensile strength and elongation at break of the inner layer of the insulation in comparison with the outer layer. Therefore, the Examiner is kindly requested to reconsider and withdraw this rejection.

2. *Claims 4-7 Over Wargotz et al. In View of McGregor et al. and Further In View of Livingston et al.*

In rejecting claims 4-7 over Wargotz et al. in view of McGregor et al. and further in view of Livingston et al., the grounds of rejection state that:

Livingston et al. discloses a cable comprising a sheath which comprises an inner layer (28) and an outer layer (30), wherein the values for tensile strength and elongation at break of the inner layer (28) are significantly lower than those of the outer layer (30) (see the C&M document attached herewith, etc. the inner layer being polyethylene and the outer layer being PVDF).

Livingston et al. also discloses the tensile strength of the inner layer being approximately half of that of the outer layer and being about 20 N/mm<sup>2</sup>, the elongation of the inner layer being no more than approximately one third of that of the outer layer and

being about 150%. It would have been obvious to one skilled in the art to apply the teaching of Livingston et al. in the cable sheath of Wargotz et al. such that the cable is stable at moderately high temperatures.

Office Action at page 4.

Again, without commenting substantively on the particular rejection of claims 4-7, Applicants submit that these claims are allowable at least by reason of their respective dependencies.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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